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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,361	03/02/2004	Noboru Yokoya	HGM-130-A	8960
21828	7590	06/06/2006	EXAMINER	
CARRIER BLACKMAN AND ASSOCIATES			SWINEHART, EDWIN L	
24101 NOVI ROAD			ART UNIT	
SUITE 100			PAPER NUMBER	
NOVI, MI 48375			3617	

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Interview Summary</b>	Application No.	Applicant(s)	
	10/791,361	YOKOYA ET AL.	
	Examiner	Art Unit	
	Ed Swinehart	3617	

All participants (applicant, applicant's representative, PTO personnel):

(1) Ed Swinehart. (3)\_\_\_\_\_.

(2) Fulchand Shende. (4)\_\_\_\_\_.

Date of Interview: 10 May 2006.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: 1 proposed.

Identification of prior art discussed: \_\_\_\_\_.

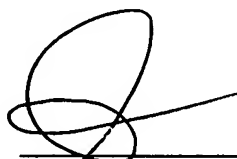
Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant proposed addition of connection of the exhaust pipe to the upper side of the expansion chamber so as to define over rejection based upon Craig. Such would appear to define over such rejection as previously made. Examiner will review amdt. and applicant's arguments when filed..

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

INTELLECTUAL PROPERTY LAW OFFICES

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**FACSIMILE TRANSMISSION COVER SHEET**

TO: THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTN: Examiner Ed Swinehart

FROM: CARRIER BLACKMAN & ASSOCIATES, P.C.

FAX NO. CALLED: 571-273-6688 NO. OF PAGES (Including this page) 13

Applicant: Noburu Yokoya, et al. Docket: \_\_\_\_\_

Serial No.: 10/791361 Title: Exhaust System for Small-Sized Boat

~~Please date stamp and return this page, via facsimile, to acknowledge receipt of~~

Message: As discussed with you on May 2, 2006, please find enclosed informal draft of proposed Amendment-B for your review. We will appreciate your feedback and comments on this draft. We will contact you to confirm the receipt of this fax, and to schedule a telephone interview with you to discuss the attached draft amendment. Thank you.

Sent via fax on May 3, 2006

. By: Fulchand Shende

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PLEASE DO NOT ENTER INTO PATENT APPLICATION FILE\*\*\*\*\***

**Attorney Docket No.: HGM-130-A**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Noboru Yokoya, et al.  
Serial No.: 10/791,361  
U.S. Filing Date: March 2, 2004  
Group Art Unit: 3617  
Examiner: Swinehart, Edwin L.  
Confirmation No.: 8960  
Title: EXHAUST SYSTEM FOR SMALL-SIZED BOAT

**\*\*\*\*\*DRAFT FOR DISCUSSION PURPOSES ONLY;  
PLEASE DO NOT ENTER INTO PATENT APPLICATION FILE\*\*\*\*\***

**AMENDMENT-B UNDER 37 CFR 1.111**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated March 14, 2006, please amend the above-identified application as follows.

**Amendments to the Specification** begin on page 2 of this paper.

**Amendments to the claims** are reflected in the claim listing which begins on page 3 of this paper.

**Remarks** begin on page 8 of this paper.

**IN THE SPECIFICATION:**

Please amend paragraph [011] in the specification as shown below, in which deleted terms are indicated with strikethrough and/or double brackets, and added terms are indicated with underscoring.

[011] According to a second aspect of the invention, in addition to ~~the~~ first aspect, ~~between the front exhaust pipe opened to an inside of the expansion chamber and the rear exhaust pipe,~~ a water-controlling plate is provided in an upper side of the expansion chamber between the front exhaust pipe and the rear exhaust pipe, and the water-controlling plate opened to an inside of the expansion chamber.

**IN THE CLAIMS:**

Please amend claims 1, 2, 4-9 and 11-14 as shown below, in which deleted terms are indicated with strikethrough and/or double brackets, and added terms are indicated with underscoring. Also, please add new claims 15-20. The following list of claims replaces all previous versions, and listings of claims in the application.

1. (Currently amended) In a small-sized boat including a water muffler at one location along exhaust pipes extending from an engine disposed in a boat body, an ~~[[said]]~~ exhaust system for the small-sized boat, comprising:

the water muffler having an interior divided into a single expansion chamber and a resonator chamber;

a front exhaust pipe coupled to the engine and connected to said water muffler at an upper side of the expansion chamber; and

a rear exhaust pipe opened to ~~[[the]]~~ an outside of the boat and also connected to said water muffler at the upper side of said expansion chamber,

~~whereby~~ wherein the water muffler significantly reduces low frequency exhaust noises.

2. (Currently amended) The exhaust system for the small-sized boat according to claim 1, further comprising a water-controlling plate provided in ~~[[an]]~~ the upper side of said expansion chamber between the front exhaust pipe, ~~opened to an inside of said expansion chamber~~, and said rear exhaust pipe, said water-controlling plate opened to an inside of said expansion chamber.

3. (Previously presented) The exhaust system for the small-sized boat according to claim 1, wherein said resonator chamber is enclosed within said water muffler and communicates with

one end of said single expansion chamber.

4. (Currently amended) The exhaust system for the small-sized boat according to claim 1, further comprising a communication pipe between said resonator chamber and said single expansion chamber, said communication pipe is disposed above a water level normally maintained in said water muffler during operation of said boat.

5. (Currently amended) The exhaust system for the small-sized boat according to claim 2, wherein said water-controlling plate is disposed above a water level normally maintained in said water muffler during operation of said boat.

6. (Currently amended) The exhaust system for the small-sized boat according to claim 2, wherein said front and rear exhaust pipes are coupled to said water muffler, in communication with said single expansion chamber on opposite sides of said water-controlling plate ~~in said water muffler~~.

7. (Currently amended) In a small-sized boat including a water muffler at one location along exhaust pipes extending from an engine disposed in a boat body, an ~~[[said]]~~ exhaust system for the small sized boat comprising:

the water muffler having an interior divided into a single expansion chamber and a resonator chamber;

a front exhaust pipe coupled to the engine and connected to said water muffler at an upper side of the expansion chamber;

a rear exhaust pipe opcned to ~~[[the]]~~ an outside of the boat and also connected to said



water muffler at an upper side of said expansion chamber;

a water-controlling plate provided in an upper side of said expansion chamber between the front exhaust pipe, ~~opened to an inside of said expansion chamber,~~ and said rear exhaust pipe, said water controlling plate opened to an inside of said expansion chamber; and

said water-controlling plate having a shape corresponding to substantially one half of a cross sectional area of the single expansion chamber.

8. (Currently amended) A water muffler for use in an exhaust system of a small-sized boat, said water muffler comprising:

a muffler body defining therein a single expansion chamber and a resonator chamber;

one connecting pipe provided with said muffler body which is adapted to connect to an upper side of the single expansion chamber to a front exhaust pipe extending from an engine of the small-sized boat; and

another connecting pipe provided with said muffler body which is adapted to connect to the upper side of the single expansion chamber to a rear exhaust pipe opened to the outside of the boat, ~~whereby the water muffler significantly reduces low frequency exhaust noises.~~

9. (Currently amended) The water muffler according to claim 8, further comprising a water-controlling plate provided in an upper side of said single expansion chamber between the connecting pipes, wherein said water-controlling plate is oriented substantially vertically.

10. (Previously presented) The water muffler according to claim 8, wherein said resonator chamber is enclosed within said water muffler and communicates with one end of said single expansion chamber.

11. (Currently amended) The water muffler according to claim 8, further comprising a communication pipe between said resonator chamber and said single expansion chamber, said communication pipe is disposed above a water level normally maintained in said water muffler during operation of said boat.

12. (Currently amended) The water muffler according to claim 9, wherein said water-controlling plate is disposed above a water level normally maintained in said water muffler during operation of said boat.

13. (Currently amended) The water muffler according to claim [[8]], wherein said front and rear connecting pipes are coupled to the muffler body at an upper side of said single expansion chamber on opposite sides of said water-controlling plate disposed in said water muffler.

14. (Currently amended) A water muffler for use in an exhaust system of a small-sized boat, said water muffler comprising:

a muffler body defining therein a single expansion chamber and a resonator chamber;

one connecting pipe provided with said muffler body which is adapted to connect the single expansion chamber to a front exhaust pipe extending from an engine of the small-sized boat;

another connecting pipe provided with said muffler body which is adapted to connect the single expansion chamber to a rear exhaust pipe opened to an outside of the boat;

a water-controlling plate provided in an upper side of said single expansion chamber between the connecting pipes; and

said water-controlling plate having a shape corresponding to substantially one half of a cross sectional area of the single expansion chamber.

15. (New) The water muffler according to claim 7, wherein said water-controlling plate is oriented substantially vertically.

16. (New) The water muffler according to claim 7, wherein said water muffler is oriented substantially horizontally.

17. (New) The water muffler according to claim 7, wherein said water-controlling plate is disposed above a water level normally maintained in said water muffler during operation of said boat.

18. (New) The water muffler according to claim 14, wherein said water-controlling plate is oriented substantially vertically.

19. (New) The water muffler according to claim 14, wherein said muffler body is oriented substantially horizontally.

20. (New) The water muffler according to claim 14, wherein said water-controlling plate is disposed above a water level normally maintained in said water muffler during operation of said boat.

**REMARKS**

Upon entry of the present Amendment-B, claims 1-20 are pending in the present application, of which claims 1, 7, 8 and 14 are independent. Claims 1, 2, 4-9 and 11-14 have been amended; and new claims 15-20 have been added by the present amendment.

The above-identified Office Action has been reviewed, the applied references carefully considered, and the Examiner's comments carefully weighed. In view thereof, the present Amendment-B is submitted. It is contended that by the present amendment, all bases of rejection set forth in the Office Action have been traversed and overcome. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Further, applicant would like to thank Examiner Swinehart for the helpful and courteous telephonic interview he conducted with applicant's representative on May 1, 2006, in conjunction with the present application and the Office Action of March 14, 2006. During the interview, arguments on the distinctions of the present invention were discussed, and the same are included in this Amendment-B.

**Claim Rejections - 35 USC §102**

In the Office Action, the Examiner rejected claims 1-14 under 35 USC 102(b) as being anticipated by Craig et al. (US 5,464,357).

***Applicant's Response:***

As noted above, claims 1, 2, 4-9 and 11-14 have been amended herein. Upon careful consideration and in light of the above amendments, applicant respectfully submits that the rejection is overcome, and that each of claims 1-14 is patentably distinct over the disclosure of Craig et al. for several reasons, including those given below.

For example, Craig et al. disclose a jet pump exhaust system having a vertically oriented

muffler including a vertically extended inlet tube 164 connected at lower side of the muffler, an expansion chamber 168, a resonator chamber 174, muffler interior space 120 formed therein, a muffler outlet 128 located at a lower side of the muffler and a muffler casing 118.

Further, Craig et al. disclose that in their system, exhaust gas from the engine is introduced into the inlet pipe 164 and the gas exhaust has does not expand until it reaches the expansion chamber 168 located at the top of the muffler interior space 120; at the point of expansion of the gas in the expansion chamber, the exhaust gas is cooled by coolant (water) emitted from a port 136 (which receives water from a suitable water line) prior to contacting the muffler casing 118 thereby keeping the casing 118 from becoming excessively hot; and further, from the expansion chamber 166, the exhaust gas passes/circulates through the resonator chamber 174 via resonator apertures 170 (col.7, line 26 – col. 8, line 23).

Furthermore, Craig et al. disclose that a spray shield 138 is attached to the muffler casing 118 and is disposed in vertically spaced relationship above the expansion chamber outlet 134 to allow free flow of gases, but to prevent the entry of cooling water into the outlet 134.

However, Craig et al. fail to disclose that each of a front exhaust pipe and a rear pipe is connected to the water muffler at an upper side of the expansion chamber, as required by each of claims 1 and 7, as amended.

Further, although Craig et al. teach the resonator apertures 170 which establish communication between the expansion chamber 168 and the resonator chamber, they fail to disclose a communication pipe between the resonator chamber and the single expansion chamber, wherein the communication pipe is disposed above a water level normally maintained in said water muffler during operation of said boat, as required by each of claims 4 and 11, as amended. Moreover, in view of the disclosed configuration of the muffler 162 of Craig et al., i.e., inlet and outlet exhaust ports 128, 164 located at lower (bottom) side of the muffler 162, no

water level can be maintained in the muffler of Craig et al. during the operation of the boat.

Further, Craig et al. fail to disclose the water-controlling plate disposed above a water level normally maintained in the water muffler, as required by each of claims 5 and 12, because in the system of Craig et al. no water level is/can be maintained during operation of the boat, as discussed above.

Still further, Craig et al. fail to disclose a water-controlling plate having a shape corresponding to substantially one-half of the cross sectional area of the single expansion chamber, as required by claim 7. The spray shield 138 of Craig et al. is located at the upper portion of muffler and has an open C-shaped structure having an opening facing downward portion of the muffler. Therefore, the spray shield is not the water controlling plate, as required by the claimed invention.

Based on the above discussion, applicant respectfully submits that Craig et al. fail to disclose several required features of the claimed invention, and therefore, each of claims 1-14 is patentably distinct over the applied reference.

Moreover, in order to expedite the prosecution of the application, applicant has amended claims 1, 2, 4-9 and 11-14 to more particularly point out and distinctly claim the subject matter which the applicant regards as his invention.

For all the foregoing reasons, applicant requests reconsideration and withdrawal of the Examiner's rejection of claims 1-14 under 35 USC § 102(b).

#### Other Matters

As stated above, in the interest of expediting prosecution of the application, applicant has amended claims 1, 2, 4-9 and 11-14 by the present amendment.

Claims 1 and 7 have been amended to further and more particularly define the subject

matter of the present invention. Particularly, each of claims 1 and 7 has been amended herein to further define that a front exhaust pipe coupled to the engine and connected to said water muffler at an upper side of the expansion chamber; and a rear exhaust pipe opened to outside of the boat and also connected to said water muffler at the upper side of said expansion chamber. Claim 2 has been amended to reflect the antecedent basis now provided in claim 1, and to more distinctly define that said water-controlling plate opened to an inside of said expansion chamber.

Each of claims 4, 5, 11 and 12 has been amended to define that a water level is normally maintained in said water muffler during operation of said boat.

Claim 6 has been amended to define that the front and rear exhaust pipes are coupled to said water muffler on opposite sides of said water-controlling plate in said water muffler.

Claim 8 has been amended to define that one connecting pipe provided with said muffler body which is adapted to connect to an upper side of the single expansion chamber to a front exhaust pipe extending from an engine of the small-sized boat; and another connecting pipe provided with said muffler body which is adapted to connect to the upper side of the single expansion chamber to a rear exhaust pipe opened to the outside of the boat.

Claim 9 has been amended to depend from claim 8, and to define that the water-controlling plate is oriented substantially vertically.

Claim 13 has been amended to define that the front and rear connecting pipes are coupled to the muffler body at an upper side of said single expansion chamber on opposite sides of said water-controlling plate disposed in said water muffler. Claim 14 has been amended to correct a minor informality.

New dependent claims 15-20 have been added to define additional aspects of the present invention. These claims include further limitations and are believed to be in condition for

allowance for the distinctive structure claimed therein. The limitations of these new claims are not taught or suggested by any reference of record.

Paragraph [011] of the specification has been amended to correct a typographical error.

Applicant respectfully submits that the above amendments, including amendments to the specification, and new claims are fully supported by the original disclosure including the drawings, and that no new matter is introduced into the application by the present amendment.

#### Conclusion

Based on all of the foregoing, applicant respectfully submits that all of the rejections set forth in the Office Action are overcome, and that as presently amended, all of the pending claims are believed to be allowable over all of the references of record, whether considered singly or in combination. Applicant requests reconsideration and withdrawal of the rejection of record, and allowance of the pending claims.

If the Examiner is not fully convinced of all of the claims now in the application, applicant respectfully requests that he telephonically contact applicant's undersigned representative to expeditiously resolve prosecution of the application.

Favorable consideration is respectfully requested.

Respectfully submitted,

Customer No. 21828  
Carrier, Blackman & Associates, P.C.  
24101 Novi Road, Suite 100  
Novi, Michigan 48375  
May --, 2006

William Blackman  
Attorney for Applicant  
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(248) 344-4422

#### CERTIFICATE OF ELECTRONIC TRANSMISSION

I hereby certify that this correspondence is being electronically transmitted, via EFS-Web, to the United States Patent and Trademark Office, on May -- 25, 2006.

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